

MOTHERBOARD

MX6B EZ

Quick Installation Guide

Manual CD Included

AOpen[®]
Component Solutions

Quick Installation Guide

Overview



Note: This Quick Installation Guide is only for quick reference. For more information, please refer to the online User's manual in the AOpen Bonus Pack CD disc.

Specification:

CPU	Intel Pentium II / Pentium III / Celeron CPU.
Chipset	Intel 82440 ZX/BX AGPset.
Architecture	ISA x 1, PCI x 3 and AGP x 1
Cache	On the CPU card.
Memory	SDRAM, DIMM x 3, maximum 512MB.
BIOS	Award Plug-and-Play, 2M bit Flash ROM BIOS.
Onboard I/O	Serial Port x 2, Parallel Port x 1, FDD x 1, UDMA/33 IDE x 2 and USB x 2.
Board Size	244 mm x 220 mm

Key Features:

- ☐ Jumper-less Design
- ☐ Battery-less Motherboard
- ☐ Full-range CPU core voltage
- ☐ Support 100MHz FSB and Clock Generator Up to 153 MHz for Overclocker
- ☐ APM Suspend To Hard Drive
- ☐ ACPI Suspend To Hard Drive
- ☐ Turbo AGP
- ☐ AC Power Auto Recovery
- ☐ Zero Voltage Wake On Modem
- ☐ Wake On LAN
- ☐ Wake On RTC Timer
- ☐ Wake On Keyboard/Mouse
- ☐ Keyboard & USB Resettable Fuse Protection
- ☐ CPU and Housing Fan Monitoring
- ☐ CPU Thermal Protection
- ☐ System Voltage Monitoring
- ☐ Support DMI Function
- ☐ FCC DoC & CE Certification
- ☐ AOpen Bonus Pack CD disc (Norton Antivirus Included)

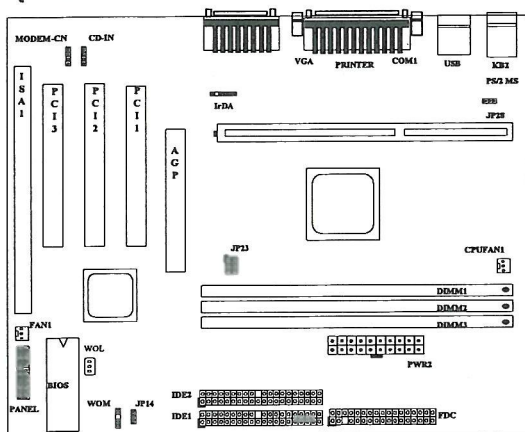
Item Checklist

Please check if your package is complete according to the following checklist.

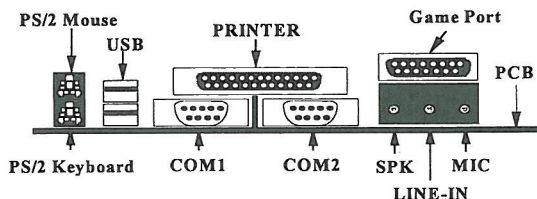
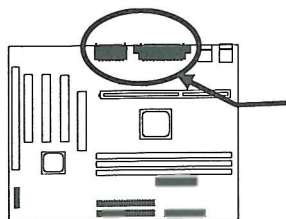
- ☒ IDE cables x 1
- ☒ Floppy drive cable x 1
- ☒ Universal Retention Module x 1
- ☒ AOpen Bonus Pack CD disc x 1
- ☒ Quick Installation Guide x 1

AOpen MX6B EZ

Jumper and Connector Locations:



Back Panel:



Jumpers:

JP14:	Clear CMOS
JP23:	AGP Ratio
JP28:	Keyboard/Mouse Wake Up

Onboard Connectors:

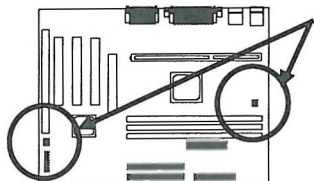
PWR2:	ATX power connector
FDC:	Floppy drive connector
IDE1:	IDE1 primary channel
IDE2:	IDE2 secondary channel
CPUFAN1:	CPU Fan connector
FAN1:	Housing Fan connector
IrDA:	IrDA (Infrared) connector
PANEL:	Front panel (Multifunction) connector
CD-IN:	CD-audio connector
MODEM-CN:	Mono in (Pin 1-2) and Mic out (Pin 3-4)
WOM:	Wake On Modem connector
WOL:	Wake On LAN connector

Quick Installation Guide

Hardware Installation

Please follow the steps below to configure your motherboard.

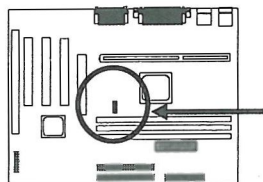
1. Plugging CPU and Connecting CPU Fan



Plug in the fan cable to the 3-pin **CPUFAN1** or **FAN1** connector. Both of these two fan connectors support hardware monitoring function, however, you can only use the CPU FAN connector to control the fan power ON/OFF.

2. Setting AGP Frequency

According to the CPU you use, 66MHz AGP frequency is automatically determined by chipset. But this jumper can be used to manually decide AGP frequency when you are overclocking. We recommend choosing a better AGP card for 1/1 AGP turbo overclocking. Some AGP card can not support 100MHz bus frequency.



JP23
1 2
3 4
5 6
Auto
(Default)

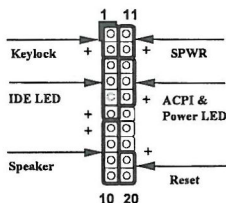
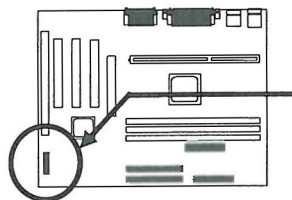
JP23
1 2
3 4
5 6
2/3

JP23
1 2
3 4
5 6
1/1

3. Connecting Front Panel Cable

Attach the power LED, keylock, speaker, and reset switch connectors to the corresponding pins. If you enable "Suspend Mode" item in BIOS Setup, the ACPI & Power LED will keep flashing while the system is in suspend mode.

Locate the power switch cable from your housing. It is 2-pin female connector from the housing front panel. Plug this connector to the soft-power switch connector marked **SPWR**.



AOpen MX6B EZ

4. Plug memory module and FDC and IDE cables.

Be careful of the pin1 orientation. Wrong orientation may cause system damage. Please refer to the diagram on page 2.

The DIMM types supported are SDRAM (Synchronous DRAM) only. This motherboard has three 168 pin DIMM sockets (Dual-in-line Memory Module) that allow you to install system memory up to 512MB. In case you install SDRAMs on DIMM2 and DIMM3 at the same time, it is crucial to identify single/double side. For this configuration, only single side SDRAMs are acceptable.



Warning: This motherboard does not support Registered SDRAMs and EDO DRAMs.

Warning: If you install two double-side SDRAMs, the possible combinations are DIMM1&DIMM2 or DIMM1&DIMM3.

5. Power On and Load BIOS Setup Default

To enter the BIOS Setup, press **[DEL]** during POST (Power-On Self Test). Choose "Load Setup Defaults" for recommended optimal performance. Please avoid of using "Load Turbo Defaults", unless you're sure your system components (CPU, DRAM, HDD, etc.) are good enough for turbo setting. For detailed information, refer to "AWARD BIOS" section in the online user's manual.

6. Setting CPU Core Voltage

This motherboard supports Pentium II / Pentium III / Celeron VID function, the CPU core voltage is automatically detected, the range is from 1.3V to 3.5V.

7. Setting CPU Frequency

The CPU frequency selection is set by going into:

BIOS Setup → Chipset Features Setup → CPU Clock Ratio

BIOS Setup → Chipset Features Setup → CPU Clock Frequency

Ratio	1.5x, 2x, 2.5x, 3x, 3.5x, 4x, 4.5x, 5x, 5.5x, 6x, 6.5x, 7x, 7.5x and 8x
External Bus Clock	66.8, 75, 83.3, 100, 103, 112, 124/31, 124/41, 133/33, 133/44, 138, 143, 148 and 153 MHz

Core frequency = Ratio * External bus clock

Pentium II	CPU Core Frequency	Ratio	External Bus Clock
Pentium II 233	233MHz =	3.5x	66MHz
Pentium II 266	266MHz =	4x	66MHz
Pentium II 300	300MHz =	4.5x	66MHz
Pentium II 333 (Deschutes)	333MHz =	5x	66MHz
Pentium II 350 (Deschutes)	350MHz =	3.5x	100MHz
Pentium II 400 (Deschutes)	400MHz =	4x	100MHz
Pentium II 450 (Deschutes)	450MHz =	4.5x	100MHz

Pentium III	CPU Core Frequency	Ratio	External Bus Clock
Pentium III 450	450MHz =	4.5x	100MHz
Pentium III 500	500MHz =	5x	100MHz
Pentium III 550	550MHz =	5.5x	100MHz

Quick Installation Guide

Celeron	CPU Core Frequency	Ratio	External Bus Clock
Celeron 266	266MHz=	4x	66MHz
Celeron 300	300MHz=	4.5x	66MHz
Celeron 300A	300MHz=	4.5x	66MHz
Celeron 333	333MHz=	5x	66MHz
Celeron 366	366MHz=	5.5x	66MHz
Celeron 400	400MHz=	6x	66MHz
Celeron 433	433MHz=	6.5x	66MHz
Celeron 466	466MHz=	7x	66MHz
Celeron 500	500MHz=	7.5x	66MHz



Tip: If your system hangs or fails to boot because of over-clocking, simply use <Home> key to restore to the default setting (233MHz). Press <Home> key first and then press power button at the same time. Note that do not release <Home> key until POST screen appears.



Warning: INTEL 440ZX/BX chipset supports a maximum of 100MHz FSB, the higher clock settings are for internal test only. These settings exceed the specification of the chipset, which may cause serious system damage.

8. Onboard Sound Chip

This motherboard comes with an ESS Solo-1 sound chip onboard. You can find the audio driver from the AOpen Bonus Pack CD disc.

Please run X:\Mx6bez\Sound\Setup.exe

AOpen MX6B EZ

The following sections are not a must to install this motherboard, they are list here for your reference.

Eliminate "?" Marks in Win95

Win95 can not recognize this chipset, because it was released before Intel 440ZX/BX. You can run AOchip.exe from AOpen Bonus Pack to eliminate the "?" marks.

Installing Bus Master IDE Driver

There is no need to install Bus Master IDE driver to support Ultra DMA/33 hard disk. If you need this driver, you can find it in the AOpen Bonus Pack CD disc or our web. Run setup.exe directly to install this program.



Warning: Installing this Bus Master IDE driver may cause Suspend to Hard Drive failure.

How to Upgrade BIOS?

AOpen Easy Flash is more user friendly than traditional flash method. The BIOS binary file and flash routine are combined together and you simply run a single file to complete the flash process.

1. Get new BIOS upgrade program from AOpen's web site. For example, 6BEZ200.EXE. It is recommended to save it to a bootable DOS floppy diskette for error recovery.
2. Reboot the system to DOS mode without loading any memory handler (such as EMM386) or device driver. It needs around 520K free memory space.
3. Execute A:> 6BEZ200
DO NOT turn off the power during FLASH PROCESS.
4. Reboot the system by turn off the power after flash is completed.
5. Reload the "BIOS SETUP DEFAULT" and reconfigure other items as previous set. Save & Exit. Done!

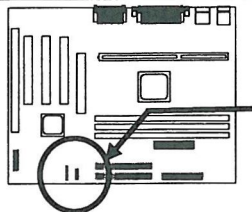
Note: The upgrade of new BIOS will permanently replace your original BIOS content after flashing. The original BIOS setting and Win95/Win98 PnP information will be refreshed and you probably need to re-configure your system.

Note: If you encounter BIOS flash fail, use PCI VGA card to check if it can be boot from floppy and flash again.

How to Clear CMOS

JP14 Clear CMOS

- | | |
|-----|-------------------------------|
| 1-2 | Normal operation
(default) |
| 2-3 | Clear CMOS |



You need to clear the CMOS if you forget your system password. To clear the CMOS, follow below procedures:

JP14



Normal Operation
(default)

JP14



Clear CMOS

1. Turn off the system and unplug the AC power.
2. Remove ATX power cable from connector PWR2.
3. Locate JP14 and short pins 2-3 for a few seconds.

Quick Installation Guide

4. Return JP14 to its normal setting by shorting pins 1-2.
5. Connect ATX power cable back to connector PWR2.

Hardware Monitoring

You can install Hardware Monitoring Utility to monitor CPU temperature, fans and system voltage, etc. For more information, please see the online manual in AOpen Bonus Pack CD disc.

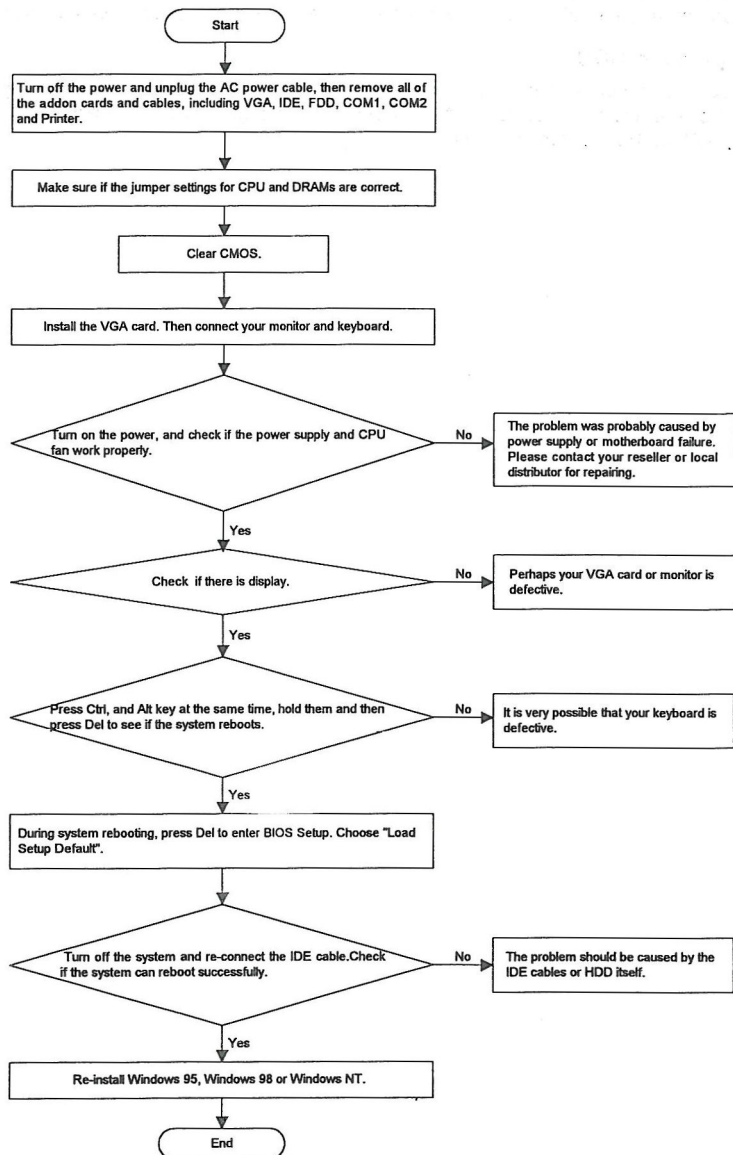
APM & ACPI Suspend to HDD

With this function, you can resume your original work directly from hard disk without go through the Win95 booting process and run your application again. For more information, please refer to the online manual in AOpen Bonus Pack CD disc.

AOpen MX6B EZ

Troubleshooting

If you encounter any trouble to boot your system, follow the procedures accordingly to resolve the problem.



Technical Support

Dear Customers:

Thanks of choosing AOpen products. Provide best and fast service to our customer is our first priority, but we receive numerous emails and phone calls worldwide everyday, it is very hard for us to serve everyone on time. We recommend you follow below procedures to seek help before contact us. With your help, we can then continue to provide the best quality service to more customers.

Thanks very much for your understanding!

AOpen Technical Supporting Team

- ☐ **Online Manual:** The complete manual is in the companion CD disc – AOpen Bonus Pack. You can choose "Online Manual" item from the autorun program to see the electronic files, or you can open the file X:\Mx6bez\Manual\English\content.pdf. (Where X: means your CDROM drive letter.)
- ☐ **Test Report:** There is a detail compatibility and reliability test report in AOpen Bonus Pack and web page <http://www.aopen.com.tw/tech/report/default.htm>. It is recommended to choose card/device from this list. To see the test report, please choose "Test Report" item from the autorun program or open the file X:\Homepage\tech\report\default.htm.
- ☐ **FAQ:** This AOpen Bonus Pack CD disc includes a lot of FAQs (Frequently Asked Questions). To read these FAQs, please choose "FAQ" item from the autorun program or open the file X:\Homepage\tech\faq\default.htm.
- ☐ **AOpen Homepage:** There is a lot of useful information in our web site, such as jumper settings, latest BIOS, drivers, and more FAQs. Visit our homepage to see if there is the answer of your problem.
 - Taiwan <http://www.aopen.com.tw>
 - USA <http://www.aopenusa.com>
 - Europe <http://www.aopen.nl>
- ☐ **AOpen News Group:** There are many news groups discussing AOpen products, your problem probably had been answered by our support engineer or professional users on these news groups. You may jump into these groups from <http://www.aopen.com.tw/tech/readnews.htm>, or subscribe these news groups from our free news server news.aopen.com.tw.
- ☐ **Contact Distributors/Resellers:** We sell our products through resellers and integrators. They should know your system configuration very well and should be able to solve your problem more efficiently than us. We believe they will be very glad to serve you. After all, their attitude of service is an important reference for you if next time you want to buy something else from them.
- ☐ **Contact Us:** If the problem still can not be solved, contact us for seeking technical support from <http://www.aopen.com.tw/tech/techglb.htm>.